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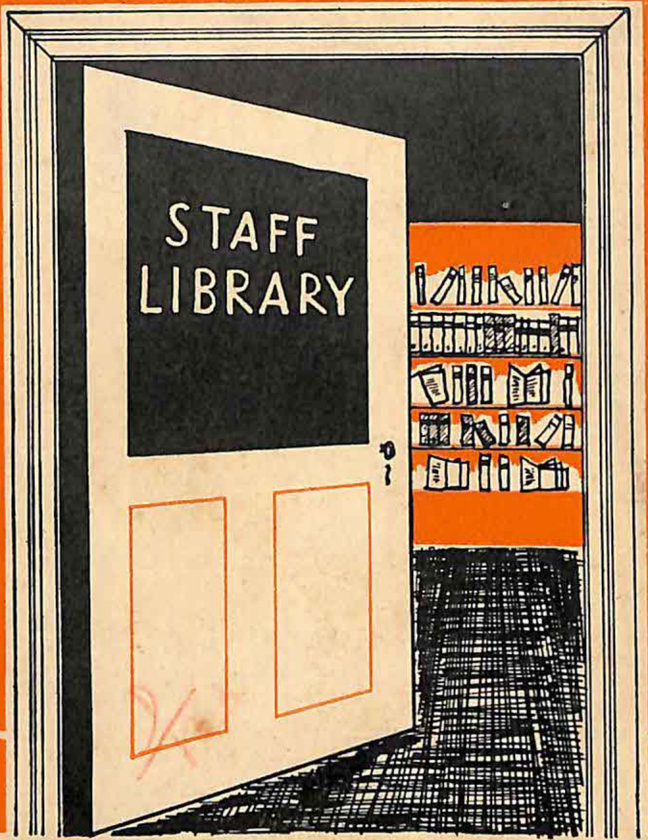

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ON THE THRESHOLD

A book for those about to
take up the profession of
teaching

BY

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§ 1. ON THE THRESHOLD

> *"Thus the teacher's task is given. He must create the virtue which is the master of all virtues—wisdom and reason and right convictions with the passionate longing which attends them."*
>
> SIR RICHARD LIVINGSTONE in *Plato and Modern Education.*

Before you begin

Before you begin your career as a teacher it is important for you to understand that there are certain qualities a good teacher always possesses. In the beginning you are not likely to have all these qualities but you must try to develop them as you gain in experience during your period of training and even afterwards when you are teaching.

First of all you must realise that teaching is hard work and that it requires great patience and skill to direct the learning activities of a number of children of varying intellectual levels. Some people seem to have a natural ability for teaching but these, unfortunately, are few. Most of the newcomers to the profession must acquire the ability to teach by study, by observing and learning from others and by being prepared to experiment. Do not disregard the guidance and advice of older teachers. Your book learning may be more up to date than theirs but their practical experience can be of immense value to you.

Success is a worthy objective and it can be yours if you pursue it with determination and with dedication.

To help you, here are some of the qualities mentioned above together with a few lines of explanation on each.

The need for 'faith' in your work

To be a good teacher you must sincerely believe in the vital importance of true education. You must believe that you are performing an urgent public service and that the results of your efforts will play an important part in the development of your country. Through your hands will pass the future lawyers, doctors, teachers, clerks, traders, technicians, scientists and many others. These are the future generation who will be responsible for carrying progress and expansion a step further. It should be stimulating for you to remember that all the great men and women of today, the Prime Ministers, the Statesmen and the Scholars of all countries were once little boys and girls at school, just like the boys and girls you will find sitting in your class who appear to have no higher purpose than to try your patience and test your skill to the limit.

So be strong in your faith and let it be the driving force carrying you forward to your goal, that of being a good teacher.

Patience and understanding

It is obvious that to become a good teacher you must make a great effort to understand your pupils and there are many good books dealing with Child Psychology which will help you. But remember you cannot close the books and say, "Now I know all about children", because you do not and will not until you have had a great deal of first-hand experience with children themselves. They are intricate and complicated little beings and no ready-made examples of child behaviour taken from books are going to fit all the children in your class.

Get to know each child as an individual and do not make the mistake of regarding your pupils as raw material to be moulded by you into identical shapes. While it is the natural desire of most children to conform, to be just the same as the others in the class, yet at the same time there is an inner process at work in them—the development of personality. This makes a child an individual and to a great extent governs his behaviour. His behaviour will no doubt come into conflict with your own conception of child behaviour from time to time even though his inclination may be to do and to be as you wish. Bear in mind then that this seeming wilfulness and perhaps defiance can be an instinctive expression of the inner growth of his personal character and not deliberate naughtiness.

As the child moves up through the school he will be continually adjusting himself to a socially accepted code of behaviour, that is, to a set of rules which those with whom he lives expect everyone to follow. So do not make hasty decisions and, when faced with a clash of wills, never try to conceal your lack of understanding with a show of your disciplinary power. You have undertaken the task of educating and caring for the child and you will do more towards helping him on his way to a well balanced adulthood if you treat his emerging personality with understanding.

Guard against a wish to subjugate and force. Seek for a relationship of mutual confidence and trust and your teaching will be much more effective.

Intellectual honesty

A teacher must honour the trust placed in him by his pupils, their parents and the community. A child looks upon his teacher as a fountain of knowledge and relies on this knowledge as being correct. No one has a greater opportunity for presenting a biased viewpoint than a teacher and this during the child's most impressionable years. It will be your duty to provide a basic knowledge of world history and the effect of religious, political and social doctrines on it. Try to see both sides of the question yourself. Your personal beliefs, however worthy, must not be stressed. Let your aim be to foster a balanced judgment so that later on, when your pupils come into contact with adult life their approach to the different doctrines presented to them may be made with a healthy, critical mind.

The need for continued study

A good teacher will never sit back and say, "I know enough to get through my job." Many do unfortunately but these are not the good teachers; they are the time-servers with little deep or real enthusiasm for their profession.

A good teacher must keep his knowledge up to date, by private reading, by further study, by attending courses of instruction and by entering into the life and work of Societies, or Discussion Groups. In fact he must be prepared to do anything which will broaden or deepen his own knowledge and experience.

Adaptability and versatility

Teachers have to face many difficulties every day. Overlarge classes, poor buildings, lack of equipment, poor opportunities for further training are but a few of the more common difficulties. To say, "How can I teach with all these difficulties?" will accomplish nothing. *A good teacher will face the obstacles squarely and by his determination and initiative, overcome them.* He will be prepared to improvise equipment, to adapt his syllabus to the conditions, to use the material which is all around him in the village, in the fields and in the forests.

Adaptability is often easier for the person who has travelled and mixed with other people from other areas or other countries.

The respect of the community

To gain and deserve this respect, his own standards of conduct and behaviour must be high. He must be regarded as a man of sound and honest judgment. He must be able to recognise worthiness in others even though they hold different views from his own. He must be prepared to say what he knows to be true and just, even if it is not the popular view. An active interest in local affairs and the well-being of the community together with a willingness to shoulder part of the work is perhaps the first step towards acquiring this respect.

Do not be dismayed if you do not possess all these qualities. Many of them will come only after some years of experience. It is more important for you to recognise that they exist and to determine to do all within your power to acquire them.

The period of training for teaching

Much of your work during your period of training will be directed towards acquiring these qualities. There will be opportunity for you to experience membership of a community through clubs and societies. Take an active interest in them and do not be content to be one of those who just attend the meetings and do no more. Be prepared to take office if required and put your heart into the work. In debates and discussions you will learn to tolerate the views of others even if you do not agree with them. You will, I hope, learn to sift the evidence and form your own opinion. *Do not be content to be just one of a crowd, taking your view from that of the majority.*

Your study will be directed, not towards the narrow knowledge gained from a few text-books, but towards a much wider reading of the opinions of others. You will not be judged a good student by what you can learn by heart but by what you understand and by how you apply your knowledge. You will be expected to form your own opinions and to be able to discuss them. Much of your work will be self-study; you will be encouraged to use a library and to discover information for yourself. This is not nearly as easy as it sounds and at first you may waste quite a lot of time and effort. With experience and help from your tutors you will learn how to use books intelligently and how to summarise what you have read. You will be encouraged to show initiative and a willingness to experiment and you will be expected both to criticise and to be criticised.

You will not be subjected to a rigid discipline. Your ability to govern yourself will be an indication of your sense of responsibility and your fitness to control others. In short, your education as a teacher goes on in all your activities, in your games, in your recreation, through your clubs, and is not confined to the lecture room.

§ 2. THE CHILD IN THE CLASSROOM

> *"It is most important that teachers should realise that children in Primary Schools are mainly practical people concerned more intimately with things than principles, but also that the interest in principles is born from the interest in things."*
>
> SUSAN ISAACS in *The Children We Teach.*

The teacher as the good organiser

In the classroom the main duty of the teacher is to ensure that his pupils shall learn. *He must be the organiser of their learning and the good teacher will be the good organiser*. If his pupils fail to learn what he has set out to teach them, he has failed in one of his most important duties. The beginner will naturally ask how the prospective teacher can become the good organiser.

First of all he must clearly understand that it is the child who is being taught and so he must study children and in particular how they behave and how they learn. The teacher must also have a deep knowledge and understanding of the subject he is teaching.

In other words the teacher must know and understand:

(*a*) *what he is to teach,*

(*b*) *how best to teach a topic in order that his pupils shall learn and understand.*

Both will receive attention, but because of its great importance (*b*) will be dealt with first, for this involves a study of the child.

Differences in ability

After only a short time in the classroom the observant teacher will discover that there is a wide range of ability among the members of his class. What the boy in the front row finds easy to grasp and understand, the boy in the back row finds completely beyond him. One boy gets his sums right very quickly while another takes a long time to get many of them wrong. Almost every class in every school shows a wide range of aptitude and ability among its members. To treat all pupils in the same way, using the same methods for all, can only lead to disaster. Not all children work at the same rate, some are very quick and others very slow, so the teacher must make allowances for these different speeds of working. The grouping of children in classes according to their intelligence (see *Examination Time*, p. 46, in this series) is one way of reducing the range of ability within a class. Even this method only reduces the problem; it does not remove it, and however carefully the grouping is done the teacher will always find great differences between individual pupils in his class. The teacher must therefore so organise his teaching that all pupils are kept fully occupied on work which they have a fair chance of completing successfully.

Emotional differences

Not only do children differ in their ability and their capacity for study but they differ very widely in their emotional behaviour. The teacher will meet many types in his class: the very shy and nervous child who needs constant encouragement and the very bold child who often needs some form of control. Some will show temper or perhaps sulk if they are corrected, others take correction very lightly indeed. There are children who show great perseverance when tackling a problem and there are those who soon give up trying. Some like to be helped, others lose interest if they are helped too much. No two children are exactly alike in their emotional behaviour and the teacher must recognise this and be prepared for it. If he is to organise their learning successfully he must be prepared to study each one of his pupils as an individual and this he can best do when he has studied children and their behaviour generally.

The child as one of a group

In spite of what has been said in the last two paragraphs there are still great similarities between children of roughly the same ages. They have much in common, they laugh at the same things, enjoy the same games and fortunately they often learn best by the same general methods. It is necessary therefore for the intending teacher to make a study of these common interests of children, always remembering that children are still very individual beings.

The willingness to learn

In the last paragraph it has been stated that many children learn best by the same methods. First must come the 'willingness to learn', for without this desire it is doubtful if the child will ever learn. *So before there can be any real hope of success the teacher must create in his pupils this desire to learn.* In some countries this can prove a great difficulty, in others the desire needs little stimulation. In the past the teacher's work consisted mainly of the giving out of information which the child was expected to absorb. The pupil was regarded as a form of human pint pot into which the teacher poured so much information each lesson, most of which ran out at the other end. Today has come a new approach to teaching. Instruction has been transformed into a type of co-operative effort between the teacher and the pupil and the essential willingness to learn is produced by *an appeal to the child's natural interests*. The pupil is required to do things for himself, to learn by his own efforts rather than to sit and listen to the teacher. Interest will be stimulated if pupils feel that there is some point or *purpose* in what they are asked to do or if it is *useful* or connected in some way with life around them or if it explains something in which they are interested.

Interest in play

Observation of young children will quickly convince the teacher that the interest in play is very strongly marked. The type of play changes as the child grows older, and during the early years in the Primary school the child's chief interest is in his own activity. Later this changes and becomes more competitive. At the end of the Primary school period he is rather more interested in playing against someone than in playing with them.

This interest in play is used by the modern teacher right through the Primary school. In the early years both *language* and *number* can be taught through suitable games. Pupils are given simple apparatus to help in the recognition of numbers and in connecting the written figure with a definite number of objects. Addition and subtraction can be taught using both individual and collective games while an understanding of the Measures will be much easier if pupils actually use them in simple problems. They can learn vocabulary by matching words with pictures of objects and learn to read by matching simple sentences with drawings or pictures.

Interest in collecting

Many children take a great interest in collecting things. This is due partly to a desire to own things for themselves but this natural interest can be used in the classroom in many ways. Stamps can be collected as a means of creating interest in Geography or to provide a background for a study of a country or about an important event. They can be used too as a starting point for lessons on the history of communications. Specimens are always required for Nature Study and pictures can be collected for use in language study, history or geography.

Interest in making and doing things

During recent years there has been a great change in methods of teaching. In the past the child was passive. He sat with arms folded and listened to what the teacher told him. This he had to remember. *It has been found that a child learns best by doing things himself*. It is estimated that he remembers 15 per cent of what he hears, 50 per cent of what he sees but 90 per cent of what he has done for himself. Once again this is because one of the interests common to most children is in making and doing things. They are essentially *active* not passive and the good teacher plans his work so that his pupils are kept busy or active all the time.

Do not be misled by this word 'Activity' which is so frequently used when talking of educational methods. The boy set to work the subtraction sum, 857 − 489, by counting sticks or matches is certainly being kept busy but his activity is of the wrong kind. In the same way the colouring of a map to show the relief of the land is certainly activity but it can only be useful activity if there is some further use for the map when it is finished. Hours of activity spent in copying a picture is again activity but of the wrong kind. *As teachers we must be particularly careful that the activity we encourage is purposeful.* Mental activity must be stimulated, the activity must call for initiative on the part of the pupil and it must advance the knowledge and enlarge the experience. Thus in Arithmetic, activity will be purposeful when it involves the solving of a new problem by using knowledge already obtained. Correct activity will be encouraged when a pupil paints a picture of his own composition, however simple it may be, or when he makes a relief map to show the effect of relief on local industry or communications.

For most children, learning and understanding come best through the actual 'doing of a job' and not through listening about it.

Suggestions for pupil activity:

Arithmetic: Shops with pupils taking turns at being the shopkeeper.
Indoor and outdoor measurement.
Model making of solid figures.
Experimental geometry by cut-out shapes and figures.
Picture graphs of weather records, household accounts, weekly marks, etc.

Language: Dramatisation. Puppets. Picture illustrations. Models to illustrate stories. Collection of suitable poetry. Diaries of events.

Nature Study:
Making and keeping a small garden. Pets corner. Rambles for observation. Weather records from own observations. Collections of specimens.

History and Geography:
Models of ships, houses, etc. Maps and models. Weather records. Collection of material for class topics. Visits to places of interest. Collection of pictures to illustrate lessons.

Learning by seeing

The majority of children learn best when they can do a job for themselves but they also understand more easily when they can see things, either the actual objects which the teacher is talking about or models or diagrams or even pictures. There is a proverb which runs: *He is the best teacher who can turn the ear into an eye.* You can easily test the truth of this by a very simple experiment. Ask a friend this question verbally: "Add together six hundred and fifty-three thousand two hundred and ninety and seventy-eight thousand three hundred and twenty-seven." He will find it very difficult and will probably ask you to repeat the question several times. Now write it down for him in figures:

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when the answer can be found instantly because the question and the figures can be seen.

If you have to explain the working of a motor car engine to a top class of boys, a working model, sectioned to show the moving parts, would be the best way of ensuring that the pupils understood. In the model they would see the cycle of events as the engine works and verbal explanations by the teacher would have meaning. Diagrams showing the various phases would not be as useful but these would be far more valuable than mere verbal description. If you still doubt this then try writing a concise but accurate description of the cycle of events without reference to any visual material. Try it on a class and judge for yourself how little they remember after the lesson is over. In simple geometry the pupil who is encouraged to make a sketch in order to translate the problem from words to a drawing, is himself taking the best course towards understanding what has to be done and often how it can be done. This topic of visual teaching is discussed much more fully in a separate volume of this series.

Interest and discipline

Mental activity is dominated by interests and concentration is very closely connected with interest. With young children interests change rapidly, they are rather fickle and short-lived and in consequence *young children are unable to concentrate on any topic for very long*. For this reason lessons are short in the lower standards but increase in length as the child grows older, for the ability to concentrate or retain interest increases with age.

Children like to be successful and they like to feel secure. Both success and security are more likely to be found in a well ordered classroom and in a well controlled class. It is fairly certain that if a child is interested in the work he has to do and can see some purpose in it he will want to do it and will rarely waste time in being naughty. *Poor discipline often results from a class having too little to do or when there is no interest in the work to be done.*

There are no set rules for controlling a class, for so much depends upon the personality of the teacher, but some advice can be given. It is important that the new teacher should begin his teaching career correctly. It is not easy to recover from a poor start, especially in class control and management.

Classroom management

Here are ten important points which will help you to make a good start:

1. *Set your own standards high.* Make up your mind what you are prepared to accept and determine to get it. Remember that you will only get the standard you are prepared to accept. Remember also that your ability as a teacher depends upon your own mental state. If you are harassed by constant difficulties, your life will not be very happy and your health will suffer. This will be reflected in your class.

2. *It is essential to start well, hence strictness for the first few weeks is important.* Firmness remember, not harshness. Be on the watch for small acts of disobedience and correct them, thus setting your own standard of behaviour. As a very experienced teacher has expressed it—"A class will spend the first three or four days in summing up the new teacher; the next three or four days in trying him out and the remainder of the time in playing him up, if he will let them."

3. *Be ready to start work right at the very beginning of the lesson.* Let there be no doubt about it, no fumbling for books, sending out for a map, searching for your note-book or looking to see if you can find a

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piece of chalk. Be ready and waste no time in getting down to work. The discipline of the day is often ruined in the first five minutes.

4. *Be orderly in your habits*—insist on a tidy classroom, tidy desks, methodical display of diagrams, etc. The classroom is a place for work, a workshop if you like, pleasant to work in but not a playroom. Apparatus and books must be kept tidily in their right places. The blackboard must be kept clean, desks arranged in orderly fashion and the pupils themselves encouraged to sit correctly. An experienced teacher visiting a school can judge at a glance the 'atmosphere' of a classroom. If it is one of purposeful work or if it is one where work is careless and slovenly. If there is a healthy and co-operative spirit this will be evident without questioning and without explanation.

5. *Make sure no pupil or group of pupils is ever without a job of work to do.* In other words keep every pupil busy.

6. *Learn the names of your pupils by having a classroom plan so that you can call them by name.* This is much more effective than having to say—"that boy in the corner, no not you; the next boy; no, the boy the other side."

7. If you are teaching, *insist on the attention of each member of the class*. Watch for the first signs of inattention, naughtiness or mischief. Remember though that the fault may well be yours. You might have been talking too long, in a voice which was not interesting to listen to. Your explanations might have been confused or your approach to the topic

might be dull. To have to call your class or a certain pupil to attention is usually a sign of weakness on your part. It shows that you do not realise that the pupils are reacting to your poor lesson in a perfectly normal way. Be prepared to change your method, even change the detail of a lesson in order to revive interest and attention.

8. To allow a class to do as it pleases results in the class despising you for your weakness. It is respect you need, not popularity, and children respect ability, justice, kindness and strength.

9. Even if you are strict, be just, and remember that often a child's view of an offence is not quite the same as yours.

10. After a firm start it is possible to relax, perhaps after the first month, and then you can start to build up a spirit of friendly co-operation. You can deal with individuals, you can be friendly and free because you are basing your attitude on a solid foundation of respect.

Now here are three very important 'Don'ts':

1. *Avoid sarcasm and bitterness and the habit of ridiculing a child in front of the class.* This breeds fear and a feeling of inferiority. In turn it may cause deliberate and vicious behaviour. Moreover the teacher using it is taking a very mean advantage and children are sensitive enough to know this.

2. *Avoid shouting or bullying with your voice.* Usually a loud teacher produces a noisy class. Keep your voice well modulated and adapt it to the circumstances of your lesson.

3. When you are asked a question you cannot answer do not evade it by ridiculing the questioner or by giving a wrong answer just to satisfy him. All teachers meet this problem in degrees varying with their own knowledge. Some suggestions for dealing with questions in a positive way are given to help you:

(*a*) Remember it is quite natural for children to ask questions, especially when they are interested. To suppress them is to destroy interest.

(*b*) Questions must be controlled or they will cause a continual interruption and may destroy the theme of the lesson. This can be done by pauses at intervals to allow for these questions.

(*c*) Give as brief an answer as possible in as simple a form as possible with necessary explanations.

(*d*) Do not allow yourself to be sidetracked. Any pupil really interested will willingly remain after the lesson for the answer to a question which is perhaps 'off the topic' and which would destroy the continuity of your lesson if you answered it at the time of asking.

(*e*) You will sometimes be asked a question you cannot answer. If your own knowledge and your preparation of work are thorough, this will not often happen. It need not be embarrassing if you tackle it honestly and sincerely. Even an evasive answer will give no satisfaction to your pupils or yourself. Be frank and say you will have to look up the answer to that question and if your questioner is interested he can help you find it. The ability to find the answer, to know where to look, is itself an important step in the learning process.

(*f*) Often questions asked by children are not clearly expressed. It is difficult to understand just what they mean but always try to understand even by asking questions in order to obtain the meaning.

The teacher's own knowledge

Mention has been made of the teacher's own knowledge, and while this topic will be met again, mention must also be made of it here. For the teacher to be successful his knowledge must be broad and deep. Children are very clever at summing up their teacher's ability and they are usually correct. If you have to rely for your lessons on just what is in the text-book, if your exercises are always those printed for you, then you can be sure that your pupils will realise your limitations within a very short time. The good teacher is always a student, anxious to improve and broaden his own knowledge and experience. He should be interested in new ideas and new or different aspects of his work and is never content to say, "I know enough, why should I bother to study?" Not only must he be keen to extend his own knowledge but he will be constantly watchful over his methods with his pupils. *He will try new approaches, different examples and watch the effects, for by this he will improve his teaching.* This takes us on to the next chapter in which will be developed, in some detail, the work of the teacher in the classroom.

§ 3. THE TEACHER IN THE CLASSROOM

"All methods must demand the active participation of the child."

M. V. DANIEL in *Activity Methods in the Primary School.*

Organisation for learning

It has already been said that in the classroom the teacher's task is to so organise his methods that his pupils learn what he has set out to teach. This has always been true and probably always will be. Changes in the methods used in this organisation for learning may take place in the future as they have in the past. Not many years ago teaching was considered solely as the passing on of information or knowledge by the teacher to his pupils. Teachers did the talking and the pupils did the listening or at least they sat quietly in their seats and gave the impression of listening and absorbing. The learning of facts by heart proved an easy way of pouring in the information and it was quite common for children to be set to learn by heart the names of the rivers of a country or the heights of all its mountains. *Today it is realised that this kind of formal instruction is by no means the best method to use, especially if the children are to be successful in both learning and understanding.*

Changing methods in the classroom

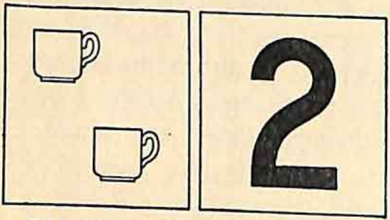
There have been many changes in teaching methods during the present century. Almost all these changes have been introduced by practising teachers and they have grown out of experiments conducted in the classroom. A good teacher is always anxious to improve his method of teaching so that his pupils shall learn and understand more. He is not content to follow the methods of his forefathers on the grounds that if they were good enough then, they are still good enough today. Progress in education is not confined to better buildings and better equipment or to smaller classes. If these improvements are to have full effect the teaching methods in the classroom must keep pace with them.

While there has been great progress and many changes during the present century there is still plenty of opportunity for more progress and for still more effective methods of teaching. *There can be no 'standstill' in education, it must move forward all the time.*

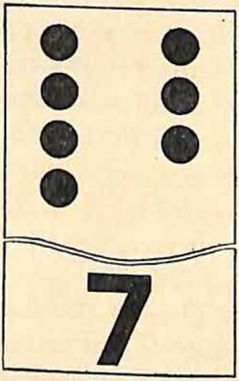
Play Way methods

One of the first changes which took place in the educational methods used with young children was to replace formal teaching by methods which used the child's love of games and play. For a time the pendulum swung right away from all types of formal lessons, and play and games occupied most of the child's time in school. It was found, however, that play by itself was not quite sufficient, so a mixture of play and formal teaching gradually became accepted as more satisfactory. Play had to be constructive and even directed into right channels if learning were to result from it. Arithmetic and language lessons took the form of games and puzzles. Thought was given to making apparatus which would teach the early steps and teachers found that this Play Way method brought with it understanding as well as learning. The diagrams illustrate the simplicity of some of this apparatus and teachers themselves were able to design and to make a great deal of suitable material for use by their pupils.

Classroom shops were set up with pupils acting as shopkeepers and as customers. Stories were made



Matching objects with numbers 1 to 10.



Jigsaw number puzzle in plywood or thick cardboard. Numbers will fit correct part only.

into games for action in the classroom, and the teacher became the play leader, controlling and directing the games of the many groups. Some formal teaching was necessary because teachers found that, good though the Play method was, it was necessary to examine and bring together the facts learned during play so that the child could see how to use those facts. Following play on the number bonds for example would come the consolidation of the facts by demonstration teaching using the blackboard and by drill exercises. Vocabulary games would be followed by practice using the words in spoken exercises. Thus while the new approach to teaching was directed through games and activity, that is through the natural interests of the pupils, the experiences gained were followed up by more formal teaching. In this way the maximum value was obtained.

Projects

Following Play Way methods for young children came what was called the 'Project Method' for children in the upper standards of the Primary school. Groups of pupils were set to work on different themes in a common topic. By this method Arithmetic was linked with Geography, History with Handicraft while language was used for reading and self-expression. Take for example a main topic on the Local Industries. This would be divided between perhaps eight groups, each working on a different aspect of the study. Their work would be guided by the teacher who would suggest what books to refer to, what material to collect, what models or maps to make and what pictures to look for and collect. At the end of the exercise there would be the combined task of welding together all the separate studies into a unified whole. To further illustrate the Project Method, here is a brief outline of a topic on Transport.

Topic—Methods of Transport and Communications

1. Collect pictures showing as many different kinds of local transport as possible. Label each picture stating where such transport is used and for what purpose.
2. Arrange these pictures in groups to show different classes of transport:
    (*a*) Propelled by man.
    (*b*) Propelled by animals.
    (*c*) Mechanical transport.

   Separate (*c*) into: steam; motor (including jet); electric transport.
3. Collect pictures showing methods of transport used in other countries and arrange them as in 2, above.
4. On a map mark in the main railways of the country in red and the main roads in blue. Mark in the ports used by foreign ships. If there are any airports mark them in black.
5. Find what exports leave the country and what main imports come in.
6. Make a list of the import duties which have to be paid on six main imports.

7. Find out how you would make the journey from the capital of your own country to the capital of the country next to it. Find what the journey would cost you.
8. Much of our transport depends on 'wheels'. Try to find out how the wheel was invented and collect some pictures of types of wheel in use in your own country.

Here there is enough work to keep eight groups working for a week or two. Much of the collecting can be done out of school time and of course pupils can work on more than one group.

These new methods have been modified with the passage of time, for it has been realised that, good though they can be in the hands of the expert teacher, they can easily fail if they are not properly used. They demand a great deal of time, often rather more than the school curriculum can allow. They require careful preparation by the teacher and rather more help and supervision than any teacher can possibly give as long as classes remain as large as they are. Even with these great difficulties the methods are good and sound and it would be wrong to dismiss them because of difficulties. *Such methods were introduced because the child learns and understands best from his own activities.* The methods can be modified to suit present-day conditions and can be used, perhaps not to their full extent, for many parts of the school syllabus. Some of the work such as the collection of specimens and material can be done by pupils in their own time after school or at week-ends.

Formal instruction

If the teacher is to organise his pupils' learning successfully there will be a place in his plans for formal teaching—not the formal teaching of the past but a new and enlightened method of instruction based on the knowledge he has gained of child behaviour. Lessons which consisted, not long ago, of the giving out of information will now be adapted so that the pupil takes a full part in them. Use will be made of modern teaching apparatus—maps, pictures, diagrams, models, specimens, films and filmstrips and, when advisable, of the broadcasting service. Lessons will be based not so much on the giving out of so many facts but on the understanding of the facts and the effects they have on our daily lives.

The content of the teaching

It has been emphasised that, in the classroom, the teacher's task is to organise the learning of his pupils. No lesson is an isolated incident in the daily routine. It is part of a planned course of study, closely related to other lessons both in the same subject and in other subjects. If any course of study is to be successful and to embrace the maximum amount of learning together with understanding then it must be carefully and thoroughly planned. It must be related to courses of study which preceded it and to those which are to follow. It must also be suitable for the age range of the children concerned, for work planned for older children in Standard VI would not be at all suitable for young children at the beginning of their school careers in Standard I. Generally the syllabus, as it is called, is prepared by a central authority and is issued to all schools for general use. This is done to ensure that all schools of the same age range and type cover the same ground and the syllabus provides for some uniformity. In those countries where there is a shortage of trained and experienced teachers a set syllabus proves a help and guide as to what should be included year by year.

The framing of the syllabus

In countries where there has been a long experience in education the syllabus for schools is often prepared by a selected body of teachers with special knowledge of the subject matter and with considerable experience in teaching it. Such a body will consider first the content of the syllabus as a whole—what can be expected of a pupil at the end of a school course, as well as the best method of attaining this. Then they will split up the work among the number of standards in the school, bearing in mind the relative difficulty of certain of the topics. Thus, while Vulgar Fractions in their simplest form may well be introduced as part of the practical work into the lowest class, the manipulation of fractions will not be included until later, probably towards the end of the school period.

A good syllabus will be broad and not detailed. It will permit of adaptation and will indicate only the main stepping stones during the years. This allows the teacher some latitude for development; he can add to the syllabus or vary it according to the special abilities of his pupils. He can change the method of approach to suit his own locality or introduce a topic in which he is especially interested or which is particularly applicable to his town. A broad syllabus is much more flexible but of course it increases the teacher's responsibility. He has to interpret and to plan and prepare so that he can be sure of getting the maximum value from it.

Interpretation of the syllabus

The teacher's first step in the preparation for his year's work is to study the syllabus for his class. It will be necessary also for him to study the syllabus for the next lower class and for the next higher class and to make a careful analysis for the school as a whole. Only in this way will he be able to see where his class fits into the pattern of the school.

Generally the syllabus supplied to him is not in great detail, it provides only the main headings or topics and the teacher must be prepared to rewrite it in an expanded form for his own use.

Arithmetic provides the most instructive example of this interpretation of the syllabus and its expansion to greater detail as a first step in preparation. Take for example Vulgar Fractions for the fourth year of education. The work to be covered includes:

(*a*) Families of fractions.
(*b*) Introduction to Equivalent fractions.
(*c*) Addition and subtraction within a family.
(*d*) Easy applications to Weights and Measures.

Looking back to the syllabus for the third year, the work outlined there includes practical work on halves and quarters; halves and quarters applied to units of weight, length, capacity, etc. For the fifth year, the work is extended to include simple addition, subtraction, multiplication and division.

The teacher is now in a better position to start his pre-lesson planning, for he knows what was done last year and what his pupils are to be ready for next year.

Pre-lesson planning

Taking the same example as before, the teacher's first task will be to expand his outline syllabus into an outline of work to be covered like this:

1. Revision of halves and quarters by practical work on paper folding and sharing. Diagrams to show halves and quarters. Writing down fractions from diagrams and vice versa.
2. Further practice in using halves and quarters with simple money, length, weight, time and capacity, with ruler work, weighing and measuring.
3. Simple families of fractions: $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$; $\frac{1}{3}$, $\frac{1}{6}$; $\frac{1}{5}$, $\frac{1}{10}$, with practical exercises.
4. Extension of families of fractions to include: $\frac{3}{4}$, $\frac{3}{8}$, $\frac{5}{8}$, etc.
5. Simple notion of Equivalence: $\frac{1}{2}=\frac{2}{4}=\frac{4}{8}$. Use of the simple fraction board for equivalence.
6. Simple addition and subtraction within families using equivalence: $\frac{1}{2}+\frac{1}{4}=\frac{2}{4}+\frac{1}{4}=\frac{3}{4}$.
   Practical exercises to illustrate.

When the syllabus has been expanded in this way then the teacher comes to the next step, the allocation of time to each topic. Again this is not quite as simple as it would appear, for there are quite a number of factors which will influence the decision:

(*a*) The total amount of time available.

(*b*) The relative difficulty and length of the various topics.

(*c*) The capabilities of the pupils.

The young teacher will need advice and here the Headmaster from his experience and knowledge will be able to help. This example has been given at some length to impress upon the teacher right at the start of his career that the art of teaching cannot be acquired overnight. A great deal of detailed knowledge is necessary and the experience of others who have taught for some years can be most valuable.

Preparation of lessons

It is not intended to deal with this topic in great detail, for the teacher will get ample practice during his training. Main principles only are discussed so that you may be prepared for the more detailed work which is to follow.

Let it be said however, right at the start, that the teacher who goes in front of his class without having prepared or thought about his lesson is doomed to almost certain failure, just as an athlete who refuses to train is doomed to defeat. *Careful preparation is really vital and while, in time, when you have had some years of experience, you may be able to relax* *a little, you cannot afford to neglect preparation at the beginning of your career.*

The main essentials to guide your thoughts on preparation are given here in simple form:

1. First be clear on what you are aiming to accomplish or to teach.
2. Think out an introduction to your lesson. This should (*a*) arouse interest (*b*) prepare for what is to follow.
3. Work out the order of presentation: where to start and how to continue.
4. List the apparatus or equipment needed, including books, maps, diagrams, pictures, specimens, etc. Check that these are available or can be obtained.
5. Prepare details of any exercises to be worked by the teacher and by the class.
6. Decide on your plans for the use of the blackboard.
7. Make a rough time allocation for the various stages in the development of the lesson.

Presentation of lessons

It is doubtful if anyone can tell you how to teach. A good teacher can show you by demonstration, he can suggest methods and can direct your study of basic principles but he cannot make you a good teacher. Only you can do that by using all the knowledge you gain during your training and by careful observation and study of how good teachers go about their jobs.

Do not be content to imitate but be prepared to adapt methods to suit your own abilities. If you can hold the interest of a class because you have the power of making a story interesting and thrilling, then use this power. If you are good at sketching on the board, again use it, but if you are a poor artist don't use the method when you start teaching even though you have seen someone else use it successfully. Always remember, however, that every teacher ought to develop some skill in blackboard illustration, no matter how diagrammatic, and try to practise out of class so that eventually you also may be able to employ this method.

Be observant, watch for the flagging of interest and be ready to change your method. Experiment with different methods and be self-critical. Practise voice control and be careful with your speech. A teacher who shouts usually has a noisy class, while if his voice is too quiet and badly modulated he has a restless and naughty class. Above all be enthusiastic in your teaching, for without doubt your class will catch your enthusiasm and work generally will improve. *Careful preparation, readiness in every detail and confidence that you know exactly what you are going to do are factors which will go a long way to launching you successfully as a teacher.*

Classroom management for the lesson

Many of the difficulties experienced by young teachers need never happen if only there were some attention to simple details. Listed below are suggestions for the avoidance of these difficulties which so often cause loss of control in a class:

1. If you want a special arrangement of desks, have it ready if you can. If not, be ready to get it done during the first two minutes of the lesson.

2. Make sure that chalk and blackboard duster are ready and that the blackboard is clean. If you need them, make sure that the blackboard instruments are ready to hand.

3. The maps, diagrams and pictures you wish to use should be selected beforehand and arranged in the order you need. Remember that when they have been rolled up they are difficult to exhibit. It is easier to store them flat or keep them hanging up in a cupboard.

4. Text-books, atlases, exercise books or special paper, in fact whatever you intend to use, must be ready and at hand.

5. If children are responsible for bringing their own instruments for a lesson be sure that they are warned in time.

6. There must be no hesitation on your part during the lesson while you look up your notes. Unless you are completely ready with the material for the lesson then it may lack purpose and interest will flag.

7. Careful preparation will ensure that you are ready to make a quick change of method if you notice a falling off in interest. You will have one or two extra items ready.

8. If you are using any special apparatus, make sure you know how to use it without fumbling.

Make sure also that it is in working order and ready for use. Suppose for example that you are going to use a model pump. What a catastrophe for you if the washer has perished and the pump does not work, or if you are not quite sure of how it does work. This checking of apparatus is particularly essential if you are to use a filmstrip projector. Check your knowledge and readiness by asking yourself these questions:

(*a*) Do I want any rearrangement of the class—if so how do I want them arranged in order that each child can see?
(*b*) Do I know where to place the projector and the screen to get a picture of the right size which can be seen by all without any disturbance?
(*c*) Is the projector focussed or can I focus it?
(*d*) Is the bulb working? Is there a spare? Do I know how to fix a new bulb?
(*e*) Can I connect the projector to the wall plug? Is the flex long enough and will it be safe?
(*f*) Do I know how to insert the filmstrip or slide? Shall I be sure of getting the picture the right way up and the writing the right way?

Only when you are quite sure on all these points can you be confident that there will be no hitch.

The teacher's own knowledge

A word in conclusion on the teacher's own knowledge. At the beginning of his career this is probably not very great and often a lesson is planned on the next chapter of the text-book. The chapter is spun out into a lesson by reading a passage around the class, augmented perhaps by the drawing of a map or picture or the answering of one or two questions. This is not teaching even though one or two facts have been learned. No text-book gives any more than a summary in connected form and this must be supplemented if full value is to be obtained from your lesson. It is here that the teacher's knowledge comes into play, for if he has read widely, or if he is prepared to, he can supplement the text-book. He can enlarge on the facts it gives by perhaps other applications or interesting detail or a description of his own first-hand experience. Although he will be burdened by preparation, marking, out of school activities, *the young teacher must be determined to extend his own knowledge and experience*. It may mean considerable sacrifice but he must be prepared to make it. A great deal can be gained from contact with other teachers, by reading widely, by visits to places of interest—factories, museums, dockyards, railways and the like. This is very difficult for the young teacher who is perhaps struggling to master his job and to study at the same time. It is somewhat easier for those who are able to attend courses or a Training College or Centre. Here they are helped by teachers of experience who are able to advise on and direct their studies.

§ 4. LEARNING AND MEMORY

"—learning, in the form of memorising is a necessary foundation for effective thinking."

ROBERT ELLIS in *Educational Psychology.*

The need for a good memory

No one will doubt that the student finds a good memory a great asset, for it makes learning easier. If a person is to be able to think for himself then he must have the necessary foundations of knowledge upon which to build his thoughts. For example, how could anyone think out the effects of the Industrial Revolution upon the social conditions of a country unless he knew the details or facts of the Industrial Revolution itself? The deeper his knowledge then the more opportunity he will have for correct and careful thinking. The ability to remember items of knowledge will therefore be a factor of some importance.

What is Memory?

The study of Memory is quite complicated. It is not possible to give a simple definition or a simple explanation. It is perhaps more satisfactory to consider an example rather than to attempt a detailed explanation in technical terms which few will understand. When you read a passage in a book, if you have a good memory, you will retain a great deal of what you have read. A month later you will be able to recall some of the passage and if, later still, you came upon the same passage, you would recognise it and know that you had read it before. You may even remember when and where you read this passage and this question of time and place seems to control or assist memory in some way. Again, you pass someone in the street; you are sure you have met him before and you puzzle over where and when you met him. If you are able to recall this you are often able to remember other things, his name, occupation, where he lives and so on.

It is usual to consider Memory under two main headings:

(*a*) Rote Memory
(*b*) Rational Memory

but this division is artificial as both are very closely connected and cannot really be separated and treated as if they were entirely different.

Rote memory and rote learning

Rote learning means learning by rule or even learning by heart when the full understanding of what you are learning is not essential. There are many examples in teaching, especially at the lower levels: the addition and subtraction bonds, the multiplication tables, certain main dates in history, the spelling of certain words or the names of the rivers of a country. This form of learning is considered necessary in the lower standards because certain basic facts must be known by heart before further progress can be made. Problem work in Arithmetic involving multiplication or division would be seriously hindered if the pupil did not know his multiplication tables by heart. In the same way the rote learning of the spelling of certain words is helpful, especially in a language such as English where the phonetic rules are often broken.

Rote learning does not imply any ability to use the facts learned. There are many pupils who know the multiplication tables perfectly. They can repeat them without error, forwards and backwards, and can answer questions on them even when the order is changed. Yet these same pupils cannot use or apply this knowledge when faced with a simple arithmetical problem based on multiplication. Similarly a pupil may be able to spell a word and yet not be able to use it correctly in a spoken or written sentence.

Not many years ago rote learning was the main method used by teachers in order that their pupils should learn a large number of facts, and while, as you have seen, this can be useful, the method cannot be considered to be satisfactory by itself.

Rational learning and rational memory

Rational memory, which means remembering through reasoning, depends upon understanding and the association of ideas and knowledge. When a boy after his first boxing match, in which he was bruised and sore, remembers this match he will also remember his soreness and his bruises. The one is associated with the other. Again a pupil who has studied the simple geometry of the triangle by practical exercises will remember, when he sees the drawing of a triangle, many of the facts he has discovered. He will recall that the sum of the angles is 2 right angles, that the largest angle is opposite the longest side and indeed any other facts which he has learned. Here, too, you have the association of ideas and knowledge and his remembrance of these facts we attribute to 'rational learning'. In the study of the geography of a region the pupil is taught to associate communications with relief, the products of the land with climate and the position of the large towns with the location of the main industries. Later, when studying an entirely different region, he will make similar comparisons. In History, too, the study of one period will often provide the method for the study of another.

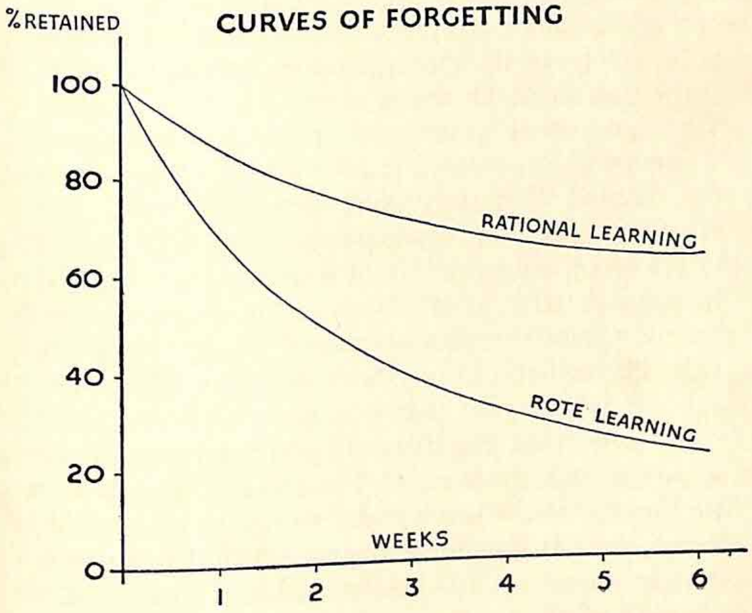
Rational learning and interests

As the pupil progresses through the school, the amount of his knowledge will increase and it is not difficult to see that rational memory will become more and more important and necessary. Rational learning is also closely connected with interest in the topic to be learned. This has been the subject of a number of experiments in which students have been set to learn a paragraph on a topic in which they are known to be interested. They have also been asked to learn another paragraph on a topic in which they are known not to be interested. The results show that they find it much easier to learn the paragraph in which they are interested and they learn it much more quickly. They also remember it more easily.

Often a pupil who has a keen interest in one subject will develop a desire to know more of another subject with which it is closely connected. For example the boy who has a deep interest in motor cars and motor cycles will often show an increased interest in Mathematics when he discovers that his understanding of the working of the petrol engine depends largely on a working knowledge of mathematics. An interest in History will often result in a desire to read even in a pupil who has never shown any inclination to read for pleasure before. *Interest in a subject or a topic has the effect of giving meaning to the subject and the learning of it becomes easier*. Even with less intelligence, a pupil who has a considerable interest in a subject will often develop far greater understanding of the subject than the more intelligent pupil who is not interested in it.

Forgetting

How often the teacher is depressed by the little his pupils remember of the last lesson, even a few days afterwards. They appear to have forgotten all that was taught in spite of the energy the teacher put into his lesson and the evident interest of his pupils. This is a very real problem and one which affects all teachers and so we should know more about it. The rate at which we forget things we have learned has also been the subject of many experiments over a number of years. In one of these experiments, a group of pupils was set to learn two things, one of which had a definite meaning which the pupils understood while the other was a group of nonsense words. The first was meaningful to the pupils and would be learned rationally while the second had no meaning and would be learned by rote or by heart, just as a parrot would learn and remember to say 'Hello' or 'Good morning'. Then by testing over a



period of time, say six weeks, the teachers were able to judge how much had been remembered of each. The results of this experiment are shown graphically and if you study this you will notice that the rate of forgetting is much faster for rote learning than for rational learning. *In other words we remember best what has meaning or what we understand.*

The need for revision and drill

What has been said above is not all that can be gained from this experiment. The shape of the curve shows that the rate of forgetting is much greater immediately after we have learned the facts, for here the curve slopes steeply downwards. As time passes so the slope of the curve flattens out and the rate of forgetting is much more slow. Teachers can learn very important principles from this experiment. *If we are to prevent the pupil from forgetting what he has learned, then there must be regular and frequent revision commencing immediately*. This will have the effect of keeping the line of forgetting nearer to the horizontal. This is all the more necessary for rote learning, and the importance of regular drill work will be evident. For those teaching in Primary schools where rote learning is widely used it is a most important principle of good teaching. To take as an example the learning by heart of the multiplication tables. If the teacher sets a table to be learned at home, tests it on the following day and then immediately passes on to the next table without further revision of the first, he will find in a few days that most of the pupils will have forgotten the table. The omission of this regular drill is probably one of the main causes of the weakness in fundamental number knowledge which is so often found in Standard VI. It has also been found that rote learning is best accomplished by short, fairly concentrated periods of study with continued repetition and drill exercises. Herein lies the value of the three or four minutes of mental drill work at the beginning of every arithmetic lesson.

Rational learning on the other hand requires a more leisurely approach, for it involves the interpretation of facts, the understanding of them and often the results and effects of them. A proposition from Euclid may well be learned by heart in a matter of minutes but if it is to be understood much more time will be needed to analyse each step in the proof, to work out the connection with the step before and the one after and to realise some of its applications. Again in History, the study of a particular series of events with their causes and effects must be fairly slow. References to other books have to be made and facts and opinions marshalled in logical order if the problem is to be understood. Of the two methods, the second by rational learning will undoubtedly give the more lasting results.

So far we have seen that revisional work at frequent intervals is necessary if knowledge learned is to be remembered but there are other things which teachers may learn from the study of Memory.

Memory and intelligence

Rote learning can be accomplished even by a dull child but rational learning requires intelligence. As teachers we must be careful to distinguish between the two or we may misjudge a pupil. Thus many comparatively dull children can work mechanical sums in arithmetic quite accurately but they fail with problems. They can learn facts in History but cannot see them as the causes or results of other happenings. A child who can remember the facts he has learned is not necessarily a brilliant child and if we judge him simply on his ability to learn by heart then we may well find him a failure when he reaches the upper forms of the Secondary school.

Possibility of error

With rote learning there are few, if any, logical connections or explanations. Errors will easily be possible. Unless these are corrected early there is every chance that these errors will become permanent. For this reason it is never advisable to write errors or to make mistakes on the blackboard. The error made is likely to be remembered at the expense of what is correct. One child's errors in rote learning are likely to be different from those of any other child and the teacher must be constantly on the watch for them. There is a very good rule for dealing with them which is given now. It is: *First test to discover the error, then teach to remedy it and then test again to find the success of your teaching.* This process should be repeated: Test, Teach and Test again until there is a fair proficiency.

Value of interest

It has already been said that learning is made easier if the pupil is interested in the topic to be learned. Do not allow yourself to be confused between the teacher making a lesson or topic interesting and the teacher encouraging the pupil to develop a real and lasting interest in the subject. Both are important but in different ways. The good teacher will always try to make every lesson interesting, for by so doing he will hold the attention of his class. This, by itself, is not enough. He may be able to make a lesson interesting by being amusing, by being able to make lightning sketches on the board or by having the ability to tell a story in a vivid or exciting way. Such lessons can result in no real interest in the subject but only a passing interest in the teacher's way of taking the lesson.

Real interest can only come when there is understanding. The subject of the lesson must be related to problems within the child's experience and lessons must be planned so that the pupil is able to see the connection with things he knows and understands and which to him are important. Thus the teacher must make it his business to discover the interests of his pupils. They will not be the same for all but there will be many in common. It is by fostering these interests that the child will learn willingly and quickly.

Learning with understanding

Teaching must be directed towards understanding if the pupil is to be able to use and apply what he has learned. *In order to understand them, new facts and ideas should be linked with those the pupil already knows or has experienced.* Finding the area of a triangle for example should be based on the method already studied for finding the area of a rectangle. In the same way the understanding of square root should arise quite naturally after the study of the area of the square. Always in our teaching we should aim at this approach to a new topic and proceed from what is known to what is new or unknown. Now this is not always easy or even possible, for often explanations involve principles which are too difficult. For example a refrigerator is a very common article of kitchen furniture. Its working depends upon a number of rather advanced scientific principles and to attempt to give a full and detailed explanation to say Standard IV would be quite impossible. With such an age group it would be better to state that the electrical machine inside the refrigerator cools the air sufficiently to form ice. Simple experiments to show cooling by evaporation can be used as illustrations. Later in school life the pupils will be able to learn why this happens.

In all teaching the completeness of the explanation must depend upon the age, intelligence and experience of the pupil even if it has to be so simple that complete accuracy has to be sacrificed. Oliver Heaviside, a famous mathematician, would certainly not agree with the necessity for complete understanding at all levels. He has said: "I know mathematical processes that I have used with success for a very long time of which neither I nor anyone else understands the scholastic logic. I have grown into them and so understand them that way."[1]

Visual methods

Many people find it easier to learn and remember if they can see what is to be learned. These people we call 'visualisers' and when remembering something, they recall the picture of the event in their minds. *Vision is a very important sense for learning, and visual methods are very widely used.* It is important to realise that there are other senses which help in the same way. With some the sense of hearing is used to help learning and memory. These people can remember a piece of music after hearing it played once and can memorise a piece of poetry after listening to one recitation. Blind people develop a very sensitive touch and use this for reading and learning with Braille. In the classroom you will find that most of your pupils are visualisers but some are not, and we must recognise that not all our pupils learn best by any particular method.

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[1] *Logic* is the art of reasoning from one known fact to another. *Scholastic Logic* is the method used by scholars in carefully testing each step in such reasoning.

Capacity for learning

A word about the child's capacity for learning. There is little permanent memory before the age of 5 but memory increases with age. Thus the time taken for learning will grow less as the child grows older. So many misjudge this capacity for learning. Lessons contain too much material and the speed of teaching is too fast. The young teacher tries to teach too much too quickly, with the result that little is learned and children lose heart. With young children the power to understand is very limited. The material of the lesson must be concrete, that is, it must have to do with real things that the child can see or touch. Moreover it must be simple and it must be strictly limited in amount. The pace must be slow and there must be repetition and regular revision. As children progress through the school the pace may be quickened. Lessons can become longer and more material can be included. The bright child has a greater capacity for learning than the dull child and it is for this reason that the grading of pupils into classes according to age and ability is so necessary.

This chapter may give you the impression that learning and memory are simple processes. In fact they are both most complicated. For the present it will be sufficient if you regard them in this simple way. As you progress with your training you will realise that this simple beginning is just as necessary for you as it is for your pupils.

§ 5. THE TEACHER AND CHILD OUT OF SCHOOL

> *"Education will become real when all the children and all the adults are being trained to play their parts as living members of a living universe. . . ."*
>
> L. P. Jacks in *Education and Religion.*

Home and school

It is generally agreed by educationists the world over that a good school cannot work in isolation. It must be part of the community in which it is situated and exert some influence on it. Thus the teacher must be concerned with other things outside the classroom. *The chief external influence on the child is, without doubt, the home, and a close relationship must be encouraged between home and school.* The interest of parents must be sought. Willing co-operation between parent and teacher can have a very steadying influence on the pupil. The child who is told at home to take no notice of his teacher has divided loyalties. The same is true for the child whose home and parents are held up to ridicule by the teacher. Such an unfortunate child is likely to be unhappy both at home and at school and will not derive full benefit from either, for he lives in an atmosphere of conflict.

Parents must be encouraged to take an active interest in the school careers of their children. They must be convinced that the teacher desires their help and co-operation and does not regard them as general nuisances. Often this spirit develops only after a long period of patient and tactful effort by the school and staff, for many parents are reluctant to believe that their help and interest are really necessary for the well-being of the child and the school. There are many ways of fostering this parental interest:

1. Medical or Dental inspections, when the teacher can meet parents informally and talk with them about their children.

2. Open Days, when children show their parents the work they have been doing. Here again the teacher can meet parents and discuss topics of general interest.

3. Sports Days, Concerts, Exhibitions—all help to stimulate interest. Parents can be asked to help by assisting with judging, with costumes or with the loan of material.

4. Organised Parents' Meetings when the Head outlines the policy of the school, explains its working and deals with questions.

Whatever methods are used, their success can only be judged by the resulting interest of the parents in the education of their children. This interest is vital and no effort must be spared in securing it.

The value of school visits

Teacher-parent co-operation is only part of the teacher's responsibility. If the school is to be a living part of the community it must take an interest in what is happening in the district. Organised visits to places of interest are an important part of school education. First-hand information on any topic is very much better than that which is obtained second-hand from books or lessons. Educational visits can also help in the development of civic pride and can contribute to the good behaviour of children out of school. The care of trees, tidiness in public places, consideration for the property of others can often be dealt with more satisfactorily on visits than by talking to children in the classroom.

Educational visits can be considered as part of Visual Education. They take time and care to arrange and so are often neglected in favour of the classroom lesson which needs little special arrangement. They can, when well planned, prove of great value in teaching and in developing the broader interests of the pupil in the things around him. Often they lead to the child going to see things for himself in his own time, and the pupil who will do this is far more likely to develop into a useful citizen than the one who regards a subject or topic as something he has to learn in the classroom. Educational visits do need to be well planned, for so often they fail and become a great waste of time and energy.

Planning a visit

First and foremost in planning any visit must be a very careful consideration of the real purpose of the visit. The teacher must be quite sure that the visit will be of value and that the same result could not be obtained in any other way. It is useful to consider these questions before starting on any definite plans:

1. What are the children expected to learn from the visit?
2. Is the visit the best way of accomplishing the purpose in mind?
3. What preparatory work is necessary for maximum benefit to be obtained from the visit?
4. What follow-up work will be required?
5. Will extra supervisory help be required?
6. Will such a visit be approved by the Headmaster?
7. What administrative arrangements will have to be made? (Method of transport, cost, meals, times.)
8. Will a preliminary visit by the teacher be necessary?

To embark on any visit without a most careful consideration of the points raised above so often ruins the visit and is the main cause of the visit being a waste of time. Until the teacher has had some experience it is useful if he can accompany another of his colleagues, particularly one who is a good organiser and who has had experience of school visits. Good organisation is really essential and nothing should be left to chance. Pupils should know the programme; they should know exactly what is expected of them: the timetable, what to bring with them, if note-books are necessary, and the cost. This saves so much nervous energy that care taken over the administration is well worth the time spent on it. A previous visit by the teacher is always worth while. If the visit is to a factory then he can arrange for the pupils to be taken around in small groups. He can also emphasise what he wants the pupils to see and he can clear up any difficulties of his own. He will then be able to answer most of the questions his pupils are likely to ask.

Classroom preparation

Many visits require careful classroom preparation, while others are better without it. For example the preparatory work for a visit to a soap factory should include some general explanation of the main principles of soap manufacture, the ingredients and the processes. On the other hand a visit to a Game Park may easily be spoilt by over-preparation of what is to be seen and done. Often note-books can be prepared beforehand so that pupils have some guide as to what questions to ask during the visit. Suggestions can also be given on the diagrams that they should make or the leaflets they should collect. As with so many teaching methods there is no set drill which will apply to all. Only the teacher can decide on the method to be used and this will come, not from the text-book, but from his own observation and experience.

Often a topic can be studied partly in and partly out of the classroom. Take for example a simple study of the history and development of the pupil's own village or town. This will provide material for a number of lessons and a number of visits, some of which can be made by the pupils in their own time. This out-of-school activity without the teacher should be encouraged, for it is the basis of all research. It encourages a sense of responsibility and will help to develop initiative. Problems can be set out in class for solution after school. For example:

(*a*) Transport	Number of bus companies operating in the district. Details of routes and frequency of service. Frequency of the trains and where they go. Details of fares. Nearest airport—destinations of planes.
(*b*) Local Industries	The goods or articles made in the district. Position of any factories or works. Varieties of food grown. Details of any exports to other towns.

The problems indicated above are but two of many which can be approached in this way. Sections of the class may be set to work on different aspects. Pictures and notes can be made and then, at a later date, the work of the various sections can be combined into a complete survey. The whole story may be produced as one large map with each group contributing its share. Local history and geography tackled in this way are given a reality that talking can never give them. Organised visits are not always necessary, much very useful work being possible by these informal visits in the pupil's own time.

School societies

Many schools encourage the formation of school societies and clubs. Stamp collecting societies, rambling clubs, Scout troops, first aid clubs and many others flourish in schools and fulfil a very useful function. Apart from any knowledge which the pupil may acquire, they provide an opportunity for teachers to meet their pupils in a more informal way. Often children who are quiet and reserved in class will show initiative and enthusiasm in this more social atmosphere. Teachers can learn much more about their pupils from these contacts and the pupils themselves gain in confidence. The beginnings of internal government can be formed and pupils given the opportunity of taking part in controlling their own affairs.

The House System

For out-of-school activities—games and athletics—pupils are often arranged in four Houses, each with its own captain. Members of the staff act as House masters or mistresses and guide and control the activities. A spirit of healthy competition is encouraged between Houses, and the pupil is introduced to a new loyalty, that which he owes to his House. In his House a pupil will mix with others from other classes and so a school divided into Houses can be likened to a miniature nation.

A child who is encouraged to develop a sense of loyalty to his class, his House and his School stands a very good chance of becoming a loyal and responsible citizen in his adult life. These loyalties need not clash if there is a right understanding of them and it is here that the teacher's influence is most necessary. *His own loyalty and enthusiasm are absolutely essential.* Membership of a House involves obedience to its rules, support for its activities and a willingness to accept the decision of the majority.

School functions

A school without its set functions of Sports Days, Open Days, Exhibitions and Concerts is rarely a good school in the widest sense of the word. On these public occasions a school shows itself to be a united community. There is pride of membership and of achievement and the satisfaction of co-operative effort by teachers and pupils. *Maximum value is only obtained when the pupils have been allowed to share in the planning and conduct of the function.* Even young children can act as guides: they can receive the guests, give out programmes and help to serve refreshments. Often the older ones can be left to plan and arrange their own small section in their own classrooms; they can arrange their own puppet shows or art displays. With help and encouragement from their teachers they can truly feel that the show is theirs and consequently they will take pride in it.

The social training given by these activities is now recognised as an important function of the school—that of producing the good citizen.

§ 6. THE CHILD AND THE SCHOOL

"Education today is a house of many mansions, and these mansions are open to all; they will be increased in number and variety in the not distant future, and new wings will be thrown out."

M. L. Jacks in *Modern Trends in Education.*

What is Education?

Have you ever paused to consider what is meant by this word 'Education'? If you have you will probably have found it to be a very difficult word to define. A dictionary will give several meanings, for example:

> Education: instruction; systematic training and development of intellectual and moral faculties; the results of a systematic course of instruction.

These are all true in parts but today the word has become much broader in its meaning and different people interpret it in different ways. To some it means only the result of going to school. To others it means knowledge acquired from books. Many have tried to express the full meaning in simple form but as a rule their definitions are only partly true. Take for example a very common definition: 'Education aims at enabling a person to live a full life.' It certainly does, but will everyone give the same meaning to 'living a full life'? Some people may interpret this as having plenty of time to enjoy themselves by going to concerts, dances and films. Others may think of it as being free and able to enjoy their hobbies or having enough money to do as they please. Take another definition: 'The great aim of education should be to develop to the full the possibilities of every child in accordance with the laws of God and hence to the general good of the community.' This is also true and much more complete than the first since it mentions the development of the child, the necessity for a moral code and the needs of the community. There are some definitions which are amusing when first met, such as: 'Education is what is left after one has forgotten all one learnt at school.' Even this has truth in it as the reader has gathered after studying Section 4.

Education and experience

It is perhaps easier to understand what is meant by Education if we take a much broader view. We can say that education starts at birth and continues right through life. *Every experience is part of our education.* Our babyhood spent at home with our parents is as much part of our education as the years we spend at school learning our lessons. If we are sick, if we meet with an accident, when we visit friends or meet strangers, if we travel to other towns or countries, all these and the many other experiences of life help to educate us. A man of good education will be one who has had many experiences and has benefited from them. He will have acquired the true art of living, not in solitude as a hermit but in company with all men. He will have a sense of values, of truth, goodness, happiness and beauty. He will understand and tolerate the views and beliefs of others even when they are very different from his own. He will be able to form his own judgments helped by a knowledge of the world which he may have acquired by study, through reading and literature or by travel. He will have knowledge and will know how to use it and extend it.

Education and the home

During the very early years of life the home is normally the place where the child starts his education. His parents and relatives are his teachers. In his home he is housed, fed and cared for. From his parents he learns to talk and receives his early training in social and moral behaviour. Obviously the home environment is a vital factor in the education of the child and many consider that the character formed during these early years is most difficult to change afterwards and in fact remains with the child throughout life. This is open to doubt and teachers will meet with many examples to disprove it. *What is certainly true is that the home has a very powerful influence on the education of the child.*

The place of the school

Other important institutions for providing a means of education are the schools and later the universities and of course the churches. These have become very effective as part of our social life. There can be little doubt that the schools of a country are some of its greatest assets, for in them the coming generations are cared for during a number of years of their lives. On the schools depends the future well-being of a country. Lord Hailsham has summed it up by saying, in an address at the opening of a new school: "You cannot make first class men and women without a first class system of education."

Today more and more energy is being directed towards the extension and improvement of our schools. More and more money is being spent on them, for it is recognised that a school education should be the natural right of every child, rich or poor, clever or dull. In many countries it is compulsory for all children to attend a school for some years of their childhood. Here they become part of a community made up of children from different families. Often they have different religions and in some countries they are of different races. During their years at school they have their lessons, play their games and take part in a number of school activities. Often when they reach the higher classes they take some part in their own government by undertaking duties as school prefects. They learn to work together on problems and to develop initiative and leadership. By their contacts with others from different homes of very varying types where customs are different, they will develop an understanding and a tolerance towards the views of others. Quite apart from what they learn in lesson time, they have the great and important experience of living together.

The function of the school

You will have understood from what has already been said that the aims of the school are many sided and it will be advisable to consider them separately. First the intellectual aim. Quite apart from any other purpose, one of the most important functions of the school is instruction, for *intelligent knowledge* is essential. You may wonder at this use of the word intelligent applied to knowledge. It has been used here to emphasise that the knowledge passed on to the child must be based on understanding and not be merely learning by heart. Even this is not all, for the intellectual development of the child is more complex than even learning with understanding. Certain qualities are expected alongside this factual understanding. These are well summed up by Bertrand Russell when writing of the intellectual virtues. He says: "Among such qualities the chief seem to me to be, curiosity, open-mindedness, belief that knowledge is possible though difficult, patience, industry, concentration and exactness."

All these virtues should be the aim of the teacher when planning the instruction. This has not always been so. In the past the training given in schools was rigid and limited. There were set rules of conduct and a severe discipline. A certain set quantity of knowledge was to be imparted and definite habits of industry were laid down. Children were regimented into learning and there were severe punishments for those who failed to obey. Today the system has changed; there is much more freedom in our schools. Discipline is not nearly as rigid but it is not lacking. The old rigid discipline was based on fear and often destroyed initiative and the desire to learn. Complete freedom is equally dangerous, for it often results in an inability to concentrate on anything.

The school still aims at imparting knowledge but again in a different way. The learning by heart of lists of facts has given way to a system of learning with understanding. No longer are lessons a mere recitation of facts by the teacher followed by the learning of them by the child. They are now co-operative efforts with the teacher guiding the study. Initiative is demanded and the pupil is trained to think and to apply the knowledge he has gained. The habit of industry is still there but today it is not forced through fear of punishment but encouraged by appealing to the natural interests of the child. Schools, in consequence, are happier places for both child and teacher and because of this happy atmosphere, a good school today accomplishes far more of real and lasting value than did many of the schools of the last century.

School buildings

Even school buildings have changed to keep pace with this more enlightened outlook on their function. The drab dreary buildings of the last century are fast giving way to the bright and cheerful schools of today. Classrooms are gaily coloured; windows are large; chairs and desks are more comfortable and useful. There is more apparatus and equipment and the text-books are produced attractively to encourage the pupil to study them. The amenities of schools are also better; lavatories and cloakrooms are clean, bright and spacious, so very different from the dank, smelly rooms of the past. All this encourages children to study and contributes a great deal to the sense of pride on the part of the pupils but its main effect will be found in the social training it gives, and this is part of the function of a school. *Much of the change in the educational outlook is the result of the study of the child, for it is now recognised that he must be regarded as the focal point of the system.* Psychologists have advised that because of the stages in the physical and mental development of children our school system should be divided into two main sections or stages.

The stages of school education

Not many years ago there was only one stage in school education. The child joined the school at the bottom and worked his way standard by standard to the top and then left school. The methods used were much the same throughout the school. This is still true in some countries, but ideas are changing. Educational ideas and methods are being changed by the psychologists who study the development of many children. The psychologist studies how they play and behave, how they learn best at different stages of their lives, what their interests are and how they change and also the rates of their physical and mental development. Results of these studies are themselves studied and it is found that most children are the same in certain ways at certain ages. From this has grown a new idea, the planning of schools into separate stages to match the stages of child development. The stages are of course closely linked together but the methods used in them are different, being designed to suit the particular interests and abilities of the children at a particular stage of their general development.

Two main stages

Even though the most detailed study by the psychologists shows that most children are the same in certain ways, there is great danger in making any general statements about children. *The child is essentially an individual* and, while there are very broad groupings within which certain main characteristics are common, there will be overlapping for any groups or stages we decide to form. Most psychologists will agree that the life of an individual can be divided into four broad stages: Infancy, Childhood, Adolescence and Adulthood and of these the first three concern the teacher. In many countries the first two are grouped together as Childhood and thus the main groups can, in this way, be reduced to two—Childhood and Adolescence.

Childhood:
During infancy the child develops bodily skills. Temperamental attitudes are formed, that is, he begins to have fixed feelings about things and situations. There is great interest in play and make-believe but a lack of the power of concentration. As the infant grows, the practical skills develop. He desires to use language to express himself. His interest in games and activity becomes stronger and he is willing to co-operate. During this stage there is little difference between the sexes. The age range is from birth to 11–13 years.

Adolescence:
This is the period of change from childhood to adulthood—the 'growing up' period. It is a difficult period of adjustment from childhood to manhood. The ability to reason and to think in the abstract develops, but because of the body changes there are often sudden changes of feeling. Generally adolescence is earlier in girls than in boys and its timing varies considerably from one country to another. There is, too, a growth of independence which can often lead to a conflict with authority. Age range 11–13 to 16–18 years.

While this grouping is generally accepted there can be no guarantee that the ages quoted will be true for children everywhere. Even in those countries where many tests have been made the age range is wide. However, it is safe to assume that there should be at least two main stages in the educational system: a first or Primary Stage for young children with an age range somewhere within the limits of 5 to 13 years followed by a second or Secondary Stage from about 11 years to 18 years. The right time for the separation of these two stages can only be safely and finally decided after very full tests of a very large number of children in a particular country. The stages can never be clearly and sharply defined and therefore there will be an overlapping of methods from the top of the Primary Stage to the lower forms of the Secondary Stage. *Growth and development are gradual processes and therefore changes in methods must also be gradual and neither sudden nor abrupt.*

(*a*) *The Primary Stage*

This is the first stage for young children up to the age of 11–13 years. In some countries it is divided into two sub-stages: Infants and then Primary. During this period of growth, the child is immature; he is not capable of a great deal of logical study but he is still interested in play and activity. He is unable to concentrate for long periods at a time and is lacking in complete muscular control.

(*b*) *The Secondary Stage*

This is the second school stage for older children with ages varying from roughly 11 to 18 years. In some countries this too is subdivided into Intermediate Schools and then Secondary Schools. Now the child is growing up, becoming more mature, both physically and mentally. His body is experiencing changes, for he is passing through the adolescent stage, bridging the gap between childhood and manhood. Side by side with these body changes are changes in attitude and emotions. He is capable of seeing how things and ideas are made up, of more logical understanding and he can concentrate for longer periods. He begins to see purpose in knowledge and value in study. At the end of this stage he will either pass on to some form of higher education or he will leave school and enter employment.

Thus in general, schools are planned on an age basis, for it has been found more satisfactory to educate together children of roughly the same ages because of their stages in development.

The social function of the school

For the moment let us leave the intellectual aspect of the school and pass on to the social aspect. By this is meant educating the child so that he will develop into a good citizen. The essentials of a good citizen may be summarised briefly as:

1. He should possess a keen sense of responsibility and be prepared to play his part in self-government.
2. He should be prepared to contribute his share of work to the general well-being and to work with others for the common good.

3. He should be tolerant of the views of others and be prepared to recognise that there are two sides or opinions in any argument.
4. He should have a keen sense of moral values, justice, fair dealing and mercy.
5. He should possess a sufficiently wide background of knowledge to be able to think for himself, to communicate with others and to understand their views.
6. He must be prepared, at times, to sacrifice his individuality and work as a member of a team when this will prove of benefit for the majority.

What part can the school play in all this? First, intellectual knowledge is also necessary for social training. The first step to being a good citizen is to be able and willing to earn one's own living, and moreover an ignorant man is of little real value to anyone. In school and in the class, a pupil is a member of a team or small community. Pride of membership must be fostered, and this comes quite naturally when pupils are encouraged to feel that they really are part of a school. Games, exhibitions, sports days, prize givings and indeed any function held will help to foster this team spirit, especially if pupils are given an active part to play in organising and running them. These activities do more than this. They provide opportunities for pupils to work together and they encourage initiative. Through games, for example, a child will learn and understand that there are rules which he must observe. Upon these the success of the game depends. There is a code of behaviour which he must respect, not losing his temper when something goes wrong. He will also learn by experience that he is a member of a team which is more successful when the individuals in it work together. Both success and defeat will be met and in fact games are a fair reflection of everyday life in a community. The code of behaviour is very similar for both.

The teacher as leader

The good teacher will become the leader, not the dictator, accepting suggestions and directing the effort into the right channels. There will be arguments and small quarrels, and here too he will act as judge and mediator and by his tact and understanding do a great deal to encourage tolerance. Various daily duties in the classroom can be shared in rotation. Such simple tasks as the collection of books, the arrangement of desks, the cleaning of the blackboard all help to train children in the habit of being useful. Little of permanent value will result from lessons or talks on social training. The child must experience the training himself. He must be given the opportunity of doing things, of working harmoniously in a group and of taking his rightful share of the work. *He will not learn to develop a sense of responsibility or reliability unless responsibility is actually vested in him.* However trivial the task may be the child must feel that it is important and that he should do it well.

Social training incidental to instruction

Much of the social training is not directly a part of the actual instruction and in many ways it is one of the teacher's most difficult tasks. Only by his own unselfish example and by his care in fostering this spirit of class and school pride can he accomplish his aim. Often his task is made more difficult by a conflict which exists between the home environment and that of the school, by uncooperative parents or by the effects of a poor neighbourhood surrounding the school. Often his efforts come to naught because of these reasons but he cannot and must not give up the attempt and admit failure. Many of the arguments given above apply equally to the moral training given in a school. Again direct teaching by set lessons appears to have little lasting effect. But this is no excuse for its neglect. Every institution, if it is to succeed in its task, must have some moral principle for its foundation. Perhaps the simplest of them all is that our work should be directed towards pleasing the God in whom we believe. As with the social aspect of education, the success of the teacher's efforts is governed mainly by what happens at home, for the home and family remain the chief factor in the moral education of the child.

Judging the success of a school

Finally, what will be the standards by which we shall judge the success of a school as part of our educational system? Not by its buildings, however palatial they may be; not by its equipment, however expensive and elaborate. *We shall judge it by its products, that is by the children in it.* Here are some of the things to look for when assessing the success of a school. There are others but these should be enough to set you thinking.

1. *The atmosphere of the school.* Is it one of activity with children cheerfully busy on various jobs? There may be a buzz of noise, but is this the hum of work or the noise of inattention?
2. *The pupil-teacher relationship.* Is there a happy, confident friendship between the teacher and his pupils? Are the teachers really interested in the work of teaching or are they merely time-servers?
3. *The behaviour of the pupils.* Are the children quietly orderly, moving about the school naturally, or are they regimented into silence? Are they courteous and helpful to strangers and visitors? Do they impress you because they are happy or because they seem cowed?
4. *The curriculum of the school.* Is it based on broad principles of understanding or is it based on the narrow system of learning facts by heart? Are pupils encouraged to study for themselves, to read books other than text-books, to discuss or talk about what they have seen or studied? Is the teaching 'passive' with the teacher talking and the class listening or are the pupils encouraged to co-operate in the work and take an active part in it?
5. *The school as a community.* Is there a social life in the school? Are the pupils encouraged to take an

active part in class and school activities? What clubs and societies exist? Are pupils encouraged to share in their own control and are the standards good?

You cannot form an opinion by just walking through the school and looking in at the classroom windows or by just talking to the teachers. While this may give you a first impression it can be a wrong one. You will be in a better position to judge if you mix with the pupils and the staff and in fact become part of the school. When you visit a school for practical teaching, really try to become part of it. Enter into its life and make a personal study of some of the pupils. Only when you do this will you understand what a good school stands for in our society.

§ 7. IN CONCLUSION

"Teaching is more like painting a picture or making a piece of music or on a lower level like planting a garden or writing a friendly letter. You must throw your heart into it, you must realise that it cannot all be done by formulas or you will spoil your work and your pupils and yourself."

GILBERT HIGHET in *The Art of Teaching.*

You have reached the final chapter of this small book and read extracts from a number of others. Not all books on Education or Teaching will tell the same story and often you will find that the opinion given in one differs from that given in another. You should be prepared for this and be ready to give your own opinion and make your own judgment. *Remember always, that as the structure of our society changes, so do the content and the methods of teaching.* Right through the ages, history will show that this has been true and that the methods are still changing. Education must keep pace with these changes; in fact it should lead them.

If the purpose of this book has been accomplished you will now be in a better position to benefit from the course of training which follows. The lectures you receive should have more meaning, for you will have a background of knowledge and understanding upon which further study can be built. Your practical teaching should be more purposeful, for you will have met some of the general principles upon which successful teaching is based. What the book, or any other book for that matter, cannot do is to make you a good teacher. Only you can do this for yourself by your own efforts. *Keep in front of you always the great purpose of Education which is centred, not on the text-book nor the syllabus nor even on knowledge, but on the child himself. He must be the focus of all your efforts and all your study.* Be prepared to experiment with methods and adjust your teaching on the results of these experiments. Be critical of yourself but not so critical that you become despondent and give up the attempt.

As a final thought it is sometimes good to remember that the quantity of education afforded to our children can be decided and controlled by officials or by governments but the inner quality of that education is controlled entirely by the teacher. Herein lies his great responsibility.

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